Challenge
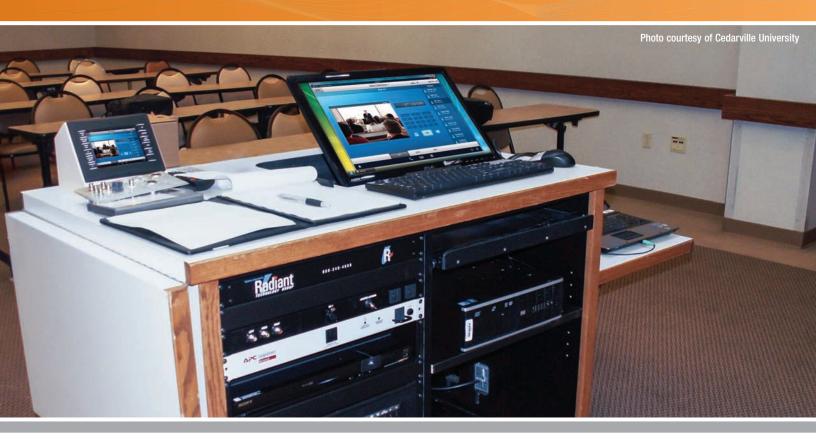
When AV Services Manager Scott Deetz set out to replace the audio visual systems in the Stevens Student Center at Cedarville University, he knew he would have just two weeks to complete the project; two weeks to tear out the old systems, install new cabling, switchers, projectors, sound systems, video and control systems and make sure everything is running properly.

"There was just no room for error," Deetz explains. "We had a faculty/trustee banquet on the first Friday of March and our annual CedarMania, which is an all-day event for high school and middle school students, on the third Saturday." Teardown of the old systems could not begin until Monday; commissioning on the new would have to be finished that second Friday night.

Deetz had been considering the change for more than two years. The Ohio institution, named one of the Midwest's top three Christian universities by US News and World Report, takes pride in its computer and media technology. "We knew we needed to replace the video projectors, which were more than five years old, but we also wanted better quality sound and we wanted to move these heavily-used rooms into the digital age."

The conference rooms in the Stevens Center include a four-room divisible ballroom, called the Event Center, plus two smaller rooms that are used as classrooms, as well as for meetings. All of these rooms are in constant use for a wide variety of programs, from staff training to religious retreats, parties and banquets to blood drives, by groups on campus and by local businesses, churches and townspeople. "We decided we needed to tear out the old analog systems and start from scratch."

Most universities schedule projects of this size for summer break. "But our campus is used quite heavily for Christian conferences and camps during the summer," Deetz explains. The best he could do was to schedule the work for Spring

Photos courtesy of Cedarville University

Break. He would actually need to finish the two smaller rooms in just one week, since they would be needed immediately when students came back.

Deetz enlisted the aid of Chuck Neal at Columbus-based Radiant Technology Group for help with system engineering, programming and installation. "I gave them a scope of work and some specific guidelines, but Radiant took it from there." The AV integration firm's team worked hand-in-hand with the university's technicians to ensure that the project would be finished on time. "We have a great working relationship."

Solution

One key to meeting the demanding schedule, according to Deetz, was the use of DigitalMedia™ technology from Crestron.

Because DigitalMedia puts high-definition audio and video, plus control, USB and data on a single Ethernet cable, it removed the need to install and terminate a bundle of seven wires to carry component video, stereo audio and RS-232. "We tore out nearly a mile and a half of copper wiring," Deetz notes, "but we were able to replace it with just 2900 feet of DigitalMedia 8G cable."

The team's decision to use Crestron DMPS-300-C presentation systems in each of the six rooms had a number of benefits. It simplified installation, because the DMPS combines a control processor, a switcher, mic mixer, audio DSP and amplifier into

a single device. The team installed each of these presentation systems into six "tech carts" or movable podiums, which also include a built-in Windows® PC, a Blu-ray® player, a Crestron wall plate transmitter with inputs for analog and digital laptops, a Crestron receiver/scaler, and a six-inch Crestron touch screen controller.

When the rooms are separated, the DMPS-300-C handles all audio processing, source control, volume control and routing between the computer and video sources in the tech cart. "One really nice feature of the new systems," Deetz explains, "is that presenters can preview any source on a local HDMI® computer monitor before they switch it to the projector. If they're showing a Blu-ray disc, for example, the audience doesn't have to watch while they go through the chapters to find the segment they want."

The team also automated certain sequences using the DMPS control processor. Press 'projector on,' for example, and it automatically turns on whatever projector is appropriate for that space, a single projector if the Event Center has been divided or dual projectors if it is combined into one large room.

When the Event Center is used as a single room, a Crestron M3 processor takes over system controls and a Biamp® AudiaFLEX takes over audio processing, sending sound to two QSC amplifiers and either 18 QSC ceiling speakers (for voice) or

four wall-mounted QSC speakers (for program audio). The team also installed six high-definition NEC® projectors and a Crestron DM16X16 switcher. "We thought about doing all of the switching on a 32X32 switcher," Deetz says, "but it was simpler to handle the routing within each tech cart, and then send a routed signal from there to a smaller switch." With the switching set up this way, technicians can send audio and video from any source in any of the four-room complex to any combination of projectors and sound systems, or send them to all of them at once.

One of the biggest benefits of the new system is its flexibility. "We still have four floor pocket inputs in the Event Center, but we've added three more wall plates, so we can move our tech carts against the wall during a banquet or, if we're using, say, just a laptop and wireless mic, do without them altogether." Should users wish to bring in a DJ or a live band for a party or event, they can plug a concert mixing board into one of the

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Scott Deetz, AV Services Manager, Cedarville University

floor jacks and output to the house sound system, yet still operate the video system and audio/video routing from the Crestron controls. For situations where the tech carts are not needed or desired, the wireless Crestron touch screen is available.

Deetz says users are ecstatic about the higher audio and video quality of the new systems, and the fact that they can plug in any laptop or video device, whether digital or analog, without having to worry about whether it will work with the projectors and other gear. The touch screens make operations simple enough that, once the room is set up, users are able to handle their events without help from the AV Services staff.

The Stevens Student Center is not the first building on campus to use Crestron technology. Deetz says his group has equipped 161 classrooms and conference rooms with Crestron control systems, 49 of which use DigitalMedia. "We installed our first DM systems back in 2010," Deetz notes. Cedarville is also a heavy user of Crestron Fusion RV® (RoomView), which allows them to manage all of their classroom technology, as well as to offer help desk services, taking over instructors' control systems from the AV office in case of a problem.

After a year of operation, Deetz says he is very pleased with the flexibility and the reliability of the new conference rooms, which have performed almost flawlessly. He says he intends to stay with Crestron technology for many years to come.

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